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Purple bacteria.—MOLISCH describes two new genera of purple bacteria isolated in the laboratory from jars of sea water, sea grass, and decaying crabs or star-fish.³⁷ For these forms he finds it necessary to add a new sub-family to WINOGRADSKY'S and MIGULA'S classification. This is sub-family VI. RHODOCAPSACEAE (cells free, not capable of swarming throughout life). Under this he places his two new forms, *Rhodocapsa suspensa* (cells sometimes capable of swarming, rods or threads with gelatinous capsule), and *Rhodotheca pendens* (power of swarming not as yet observed, cells round, with gelatinous capsule). —MARY HEFFERAN.

Origin of the pollen tube.—According to WETTSTEIN,³⁸ the rhizoidal tubes of the cycads and Ginkgo are to be regarded as completely homologous with the pollen tubes of the higher gymnosperms and the angiosperms. The writer then attempts to show that the rhizoidal tube of the cycads and Ginkgo is homologous with the vegetative end cell of the heterosporous pteridophytes. The rudimentary or rhizoidal cell of the heterosporous pteridophytes does not lead to the rhizoidal tube of the cycads and Ginkgo, and is still represented in these lower gymnosperms by a prothallial cell. Chalazogamy is regarded not as a primitive condition, but merely as an interesting special case. The paper is a preliminary statement without figures.—CHARLES J. CHAMBERLAIN.

³⁷ MOLISCH, HANS, Zwei neue Purpurbakterien mit Schwebekörperchen. Bot. Zeit. 64:223-232. *pl. 8*. 1906.

³⁸ WETTSTEIN, R. VON, Der Ursprung des Pollenschlauches. Naturw. Rundschau 21:1-2. 1906.